



VCU

Virginia Commonwealth University
VCU Scholars Compass

VCU Health Nursing

VCU Health

2020

Infection Prevention in Patients Receiving Continuous Renal Replacement Therapy through Proper Hemodialysis Line Care

Nicole Ingram

VCU Health, Nicole.ingram@vcuhealth.org

Susan McKenna

VCU Health, Susan.McKenna@vcuhealth.org

Follow this and additional works at: <https://scholarscompass.vcu.edu/vcuhealthnursing>



Part of the [Nursing Commons](#)

This poster is distributed under a Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International (CC BY-NC-ND 4.0) License (<https://creativecommons.org/licenses/by-nc-nd/4.0/>).

Downloaded from

<https://scholarscompass.vcu.edu/vcuhealthnursing/8>

This Poster is brought to you for free and open access by the VCU Health at VCU Scholars Compass. It has been accepted for inclusion in VCU Health Nursing by an authorized administrator of VCU Scholars Compass. For more information, please contact libcompass@vcu.edu.

Infection Prevention in Patients Receiving Continuous Renal Replacement Therapy through Proper Hemodialysis Line Care

Nicole Ingram, BSN, RN, CNN, CNIV and Susan McKenna, MSN, RN, CNIII;
Acute Hemodialysis

Purpose

- Understand and remove barriers to Tego™ luerlock connector use and proper hemodialysis (HD) central line care while decreasing the rate of Continuous Renal Replacement Therapy (CRRT)-related central line-associated blood stream infections (CLABSI) across adult Intensive Care Units (ICU).

Background

- Central venous catheters (CVC) identified for dialysis use are recognized as distinct from other CVC accesses; these lines should only be de/accessed by recognized dialysis nurses or nurses who have completed specific competencies.
- CLABSIs are linked to higher morbidity, higher mortality, and increased healthcare costs. ICU patients receiving CRRT are at a greater risk as they are prone to clotting, increasing the need to deaccess and reaccess the patient's CVC during therapy.
- August 2017: Tego™ luerlock connectors were implemented to aid in safety and prevent CLABSIs among HD patients
- Summer 2018: Dialysis team observed inappropriate HD line care in adult ICU patients receiving CRRT paralleled by an increase in CRRT-related CLABSIs.

Data and Evidence

Inconsistent practice surrounding Tego™ connector use:

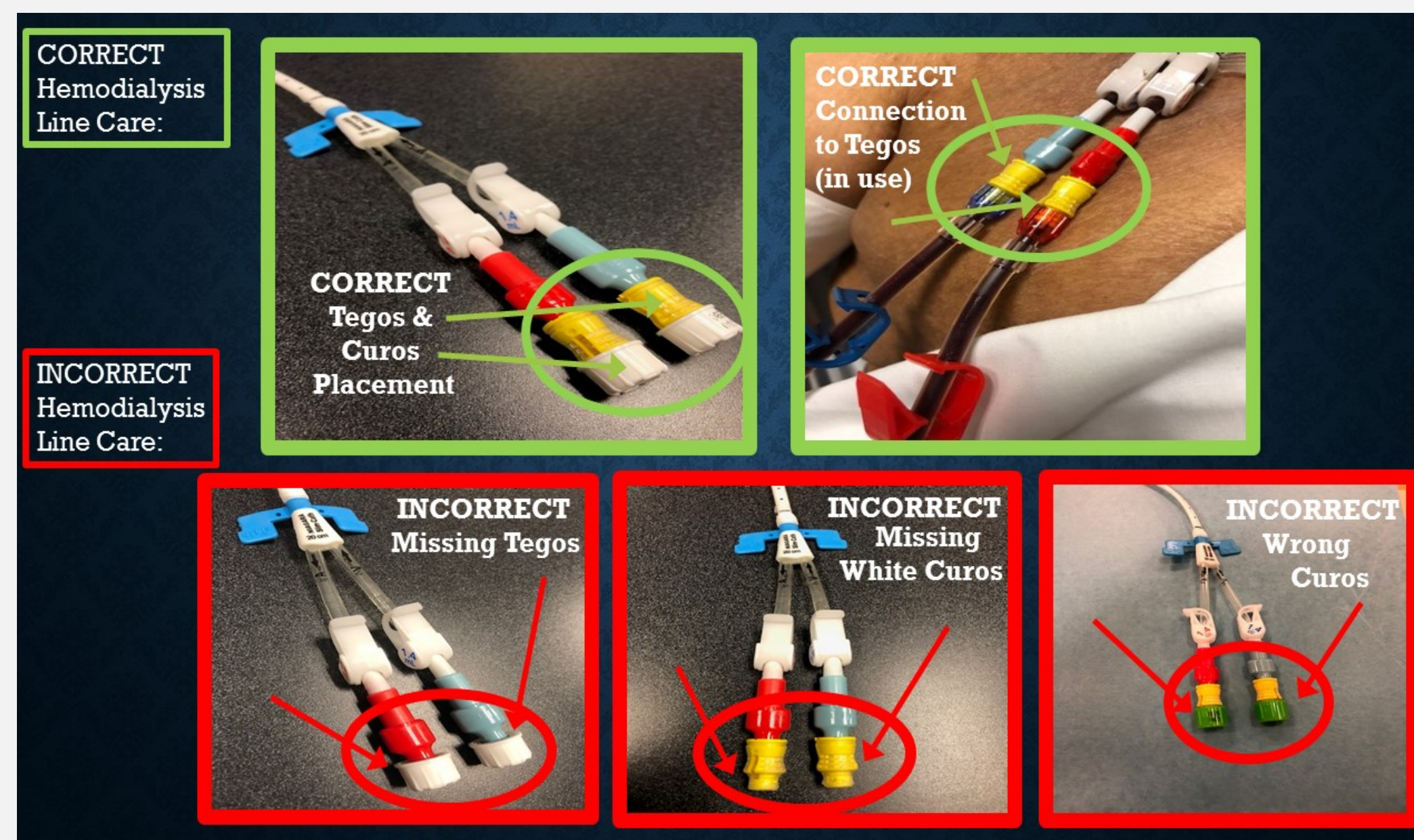
- Absence of Tego™ luerlock connectors, use of incorrect Curoso™ caps, inappropriate use of syringes dwelling on CVC

Influential Factors:

- Lack of supplies vs. lack of knowledge of supplies
- Limited knowledge of educational resources
- High staff turnover rates requiring frequent re-education

Implementation

Tego™/Curoso™ Correct Use Diagram in CRRT Toolkit



Intervention and Implementation:

- Creation and implementation of Tego™ Toolkit emphasizing proper HD line care in the ICUs
- Laminated signage placed on all adult CRRT machines accompanied by bag of appropriate supplies; initiated August 2018
- Presented to multiple Shared Leadership Councils and Key Stakeholders: Education Leadership, Critical Care Practice, Champions of Health System Infection Prevention, Clinical Coordinator Committee
- Presented at hospital-wide CLABSI Education Station: July 2019
- Weekly audits to measure Tego™ connector and HD line compliance paired with real-time one-on-one education at the bedside
- Trending of CRRT-related CLABSI rates alongside Infection Prevention division; a drill down is completed with the report of any HD CLABSI



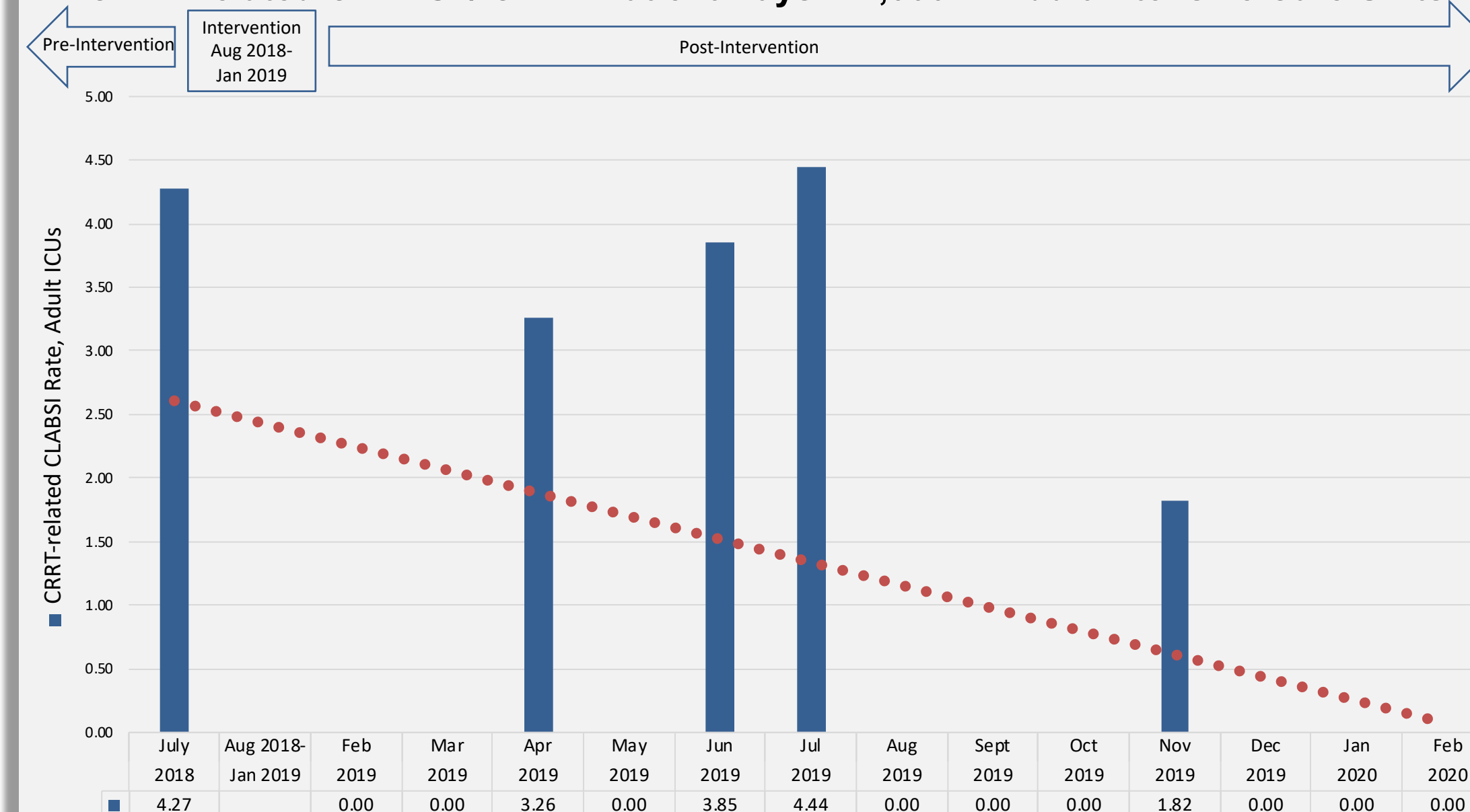
Quality Impact

Follow-up Data Collection & Quality Impact:

- Development and use of standardized weekly auditing tool by designated unit champions to track:
 - Tego™ connector, white Curoso™ cap, CRRT machine, and HD central line compliance

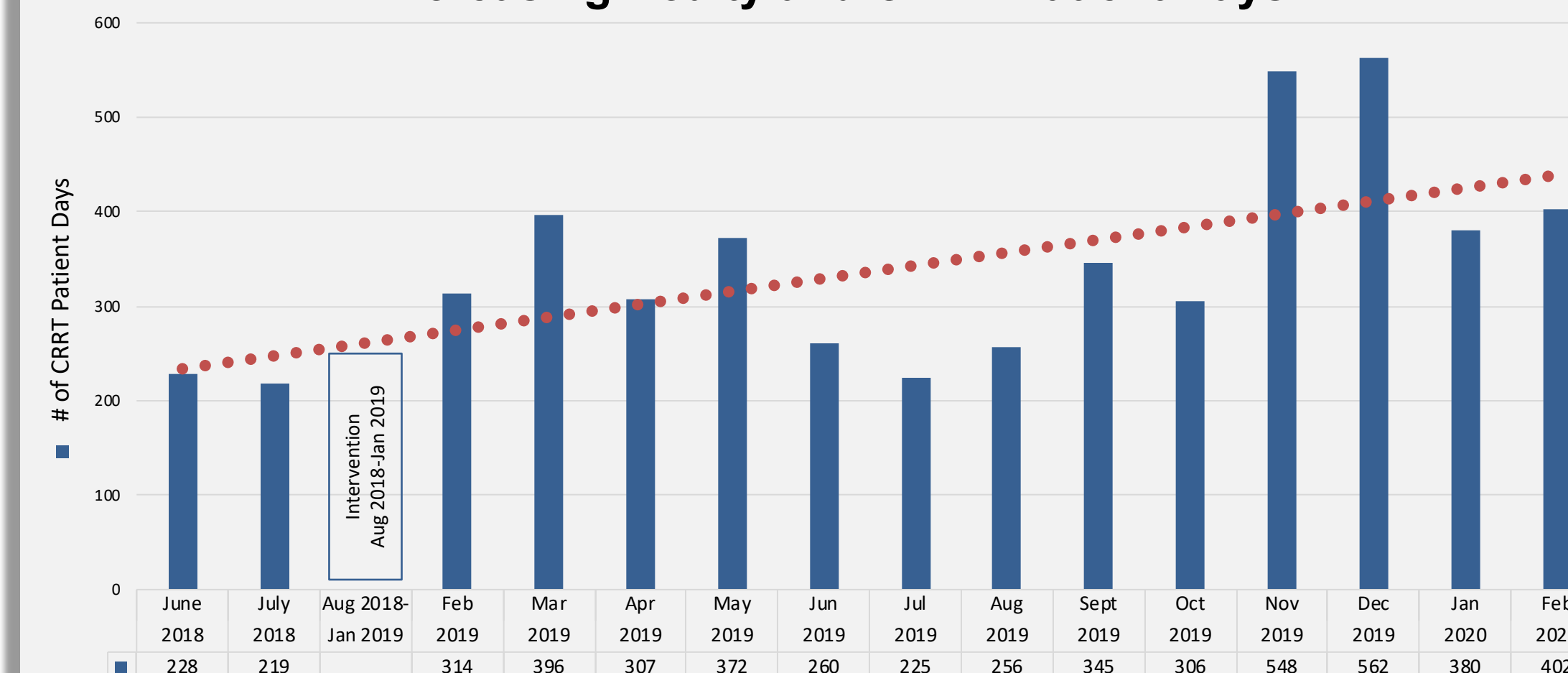
KEY TAKEAWAY: A just-in-time Tego™ Toolkit and targeted education reduced CRRT-related CLABSIs despite increased acuity and CRRT days.

CRRT-related CLABSI Rates in Adult Intensive Care Units
CRRT-related CLABSI / CRRT Patient Days X 1,000 in Adult Intensive Care Units



Record Breaking Year at VCU in 2019: 87 Liver and 304 Kidney Transplants

Increasing Acuity and CRRT Patient Days



*References available upon request